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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,281	03/14/2007	Andrew Charlton Clothier	424662013400	6667

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EXAMINER

IP, SHIK LUEN PAUL

ART UNIT

PAPER NUMBER

2837

MAIL DATE

DELIVERY MODE

05/06/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/588,281

Applicant(s)

CLOTHIER ET AL.

Examiner

/PAUL IP/

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 18-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-15 and 18-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 04 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statements (PTO/SB08)
Paper No(s)/Mail Date 8/4/2006.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 8/4/2006 complies with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 and 6-14 are rejected under 35 U.S.C. 102(b) as being anticipated by McClelland et al (6,586,904).

The patent to McClelland et al shows in figure 5 an electrical machine 12 comprising a rotor, at least one phase winding 16, and a controller 14 configured to energize the phase winding in dependence on an angular position 15 of the rotor. McClelland et al show in figure 6 a flow diagram comprising measuring the applied DC link voltage 21 and applying a predetermined correction 23-25 to the angular position of energization of the phase winding in dependence on the value of the applied DC link voltage 21.

McClelland et al disclose at column 1 lines 45-47 that:

Motoring torque is produced by applying a voltage across each of the phase windings in a predetermined sequence that is synchronized with the angular position of the rotor.

McClelland et al further disclose at column 2 lines 38-63 that a digital control law table is simply a series of storage locations in a memory of some sort for storing the parameters. McClelland et al disclose at column 5 line 61-63 that a plurality of times over a predetermined time period and averaged over that time period. McClelland et al disclose the average function as recited in the claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 5, 15, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McClelland et al (6,586,904) in view of Kushida (6,545,443).

The claims further require measuring the applied DC link voltage when the machine is connected to a power supply but before the machine is switched on and applying a predetermined correction to the angular position of energization of the phase winding on the starting the machine, in dependence to the value of the measured DC link voltage. However, the patent to Kushida discloses a vacuum cleaner control system for controlling the rotation position of a motor. Kushida shows in figure 5A the step S2 detecting an initial rotation (STOP) position of the motor on the starting of the machine. Prima facie case is made that McClelland et al detect the DC link voltage at step 21 including the DC link voltage before the machine is switched on starting the machine. Knowing the starting position of the machine includes the initial rotation stop position when McClelland et al sample the DC link voltage, it would have been obvious to one of ordinary skill in the art to operate McClelland et al's sample DC link voltage at the initial rotation stop position as taught or suggested by Kushida.

Communication Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to /PAUL IP/ whose telephone number is (571)272-1941. The examiner can normally be reached on Monday to Friday from 6:30 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson, can be reached on (571)-272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Internet correspondence **MUST** be provided with a prior written authorization by applicant in the application file record giving the Office authorization to communicate

with applicant via e-mail. Without a written authorization by applicant in place, the USPTO will not respond via Internet e-mail to any Internet correspondence which contains information subject to the confidentiality requirement as set forth in 35 U.S.C. 122.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/PAUL IP/
Primary Examiner
Art Unit 2837

5/6/2009